



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/819,434	03/28/2001	Kiwamu Inui	10873.679US01	2708
7590	09/03/2004		EXAMINER	
Merchant & Gould P.C. P.O. Box 2903 Minneapolis, MN 55402-0903			CHANAY, CAROL DIANE	
			ART UNIT	PAPER NUMBER
			1745	
DATE MAILED: 09/03/2004				

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/819,434	INUI ET AL. <i>J</i>	
	Examiner	Art Unit	
	Carol Chaney	1745	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 14 June 2004.
 2a) This action is **FINAL**. 2b) This action is non-final.
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-18 is/are pending in the application.
 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
 5) Claim(s) _____ is/are allowed.
 6) Claim(s) 1-18 is/are rejected.
 7) Claim(s) _____ is/are objected to.
 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____. | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| | 6) <input type="checkbox"/> Other: _____. |

Specification

The amendment filed on 14 June 2004 is objected to under 35 U.S.C. 132 because it introduces new matter into the disclosure. 35 U.S.C. 132 states that no amendment shall introduce new matter into the disclosure of the invention. The added material which is not supported by the original disclosure is as follows: In claim 1, "the width of the current flow paths being determined by the thickness dimensions of the edge portions" is not supported by the specification as filed. This is discussed in detail in the next paragraph.

Applicant is required to cancel the new matter in the reply to this Office Action.

Claim Rejections - 35 USC § 112

Claims 1-18 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Applicants' amendment reciting "the width of the current flow paths being determined by the thickness dimensions of the edge portions" is not supported by the specification as filed. This statement requires the width of current (assumed to mean coolant) flow paths to be a function of the "thickness dimensions of the edge portions". Since the coolant flow path width is a function of thickness dimensions, the coolant flow path width is claimed to be a function of a plurality of values of thickness, and this is not

supported by the specification. Applicants asserts page 7, lines 9-12 support the instant amendment. The relevant portion of applicants' specification reads:

In this embodiment, the fabrication tolerance of the convex portions 21 is set to ± 0.05 mm of the design target value of the protrusion ℓ . Therefore, the fabrication tolerance of a cooling slit width W becomes ± 0.1 mm.

Means for determining appropriate cooling flow path widths does not appear to be found in this section of the specification.

Claims 1-18 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The orientation of "a thickness direction" is not defined, and thus the claims are indefinite. Since all directions can be considered to have a "thickness" the direction intended is indefinite. Although the coolant flow paths are to be determined by thickness *dimensions*, the direction or orientation of a "thickness *direction*" is not defined.

Claim Rejections - 35 USC § 102

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

To the extent to which they are understood, claims 1-18 are rejected under 35 U.S.C. 102(b) as being anticipated by Ovshinsky et al., WO 98/31959 for reasons of record.

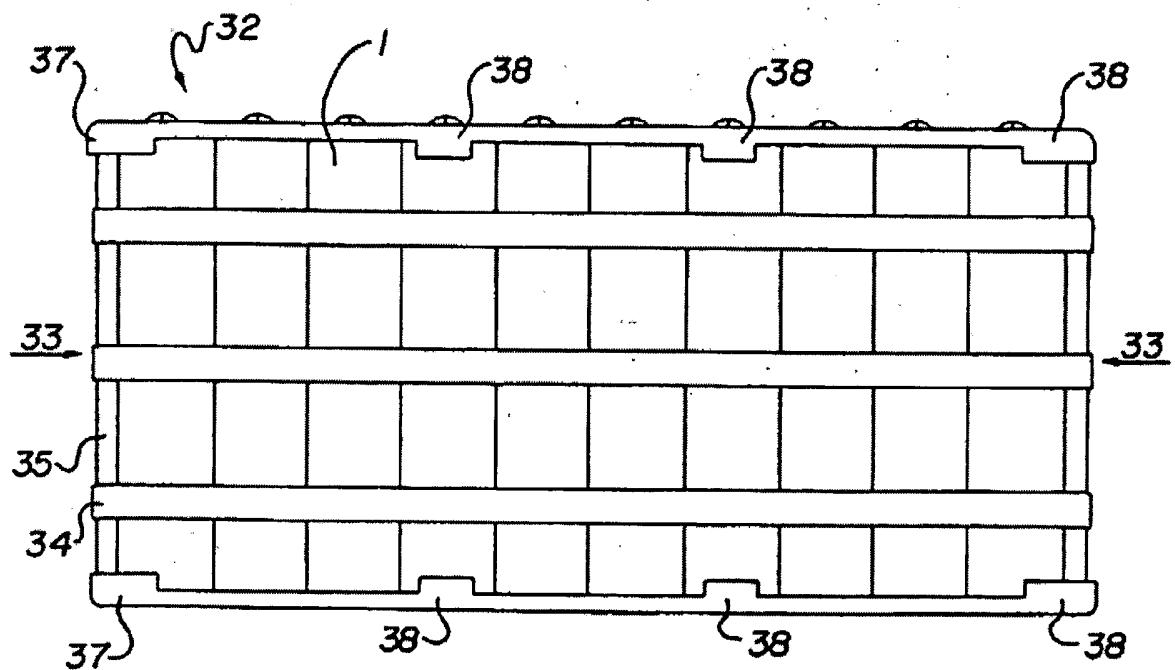
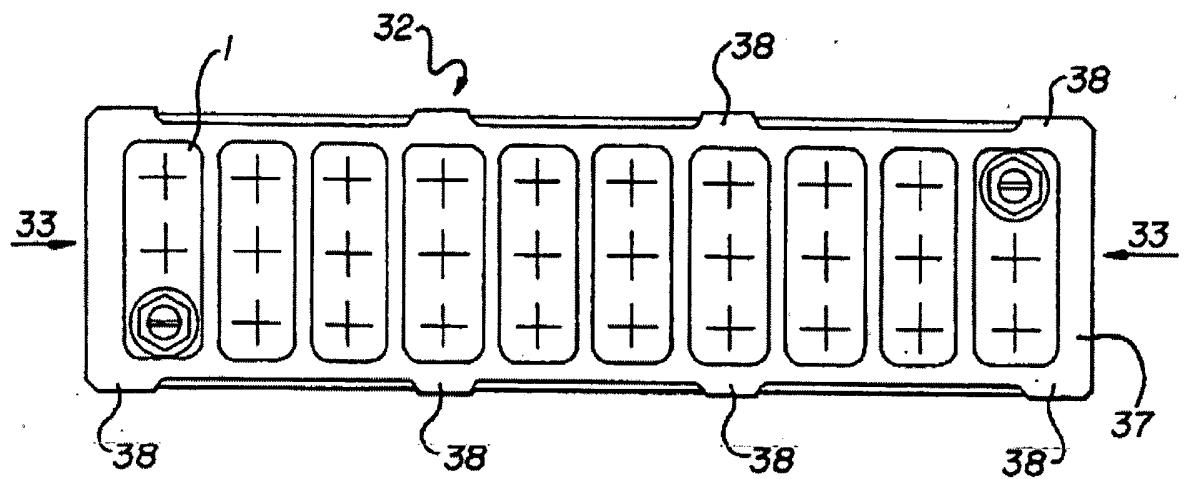
Response to Arguments

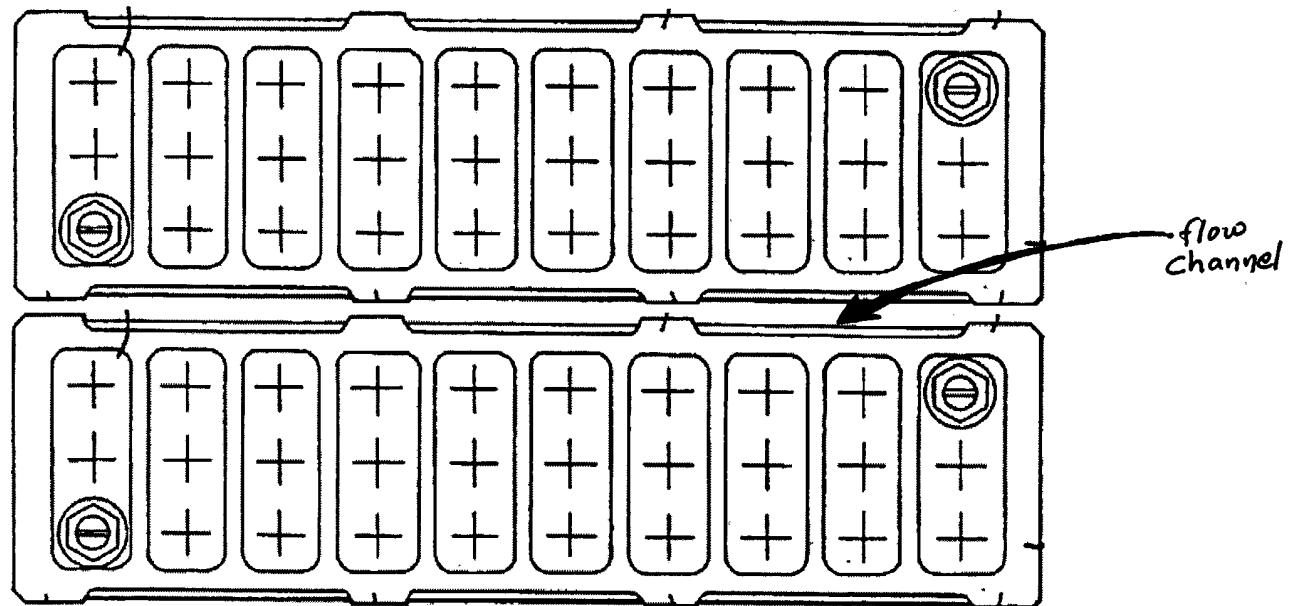
Applicant's arguments filed 14 June 2004 have been fully considered but they are not persuasive.

Applicants assert Ovshinsky et al. do not disclose or suggest that a variation in temperature can be reduced by using a coolant flow path that has a width set to a value that accounts for a predetermined tolerance in the battery modules, as recited in claim 1. However, it is noted that applicants' claims are directed to a battery pack, rather than a method of designing a battery pack. As has been discussed on the record, the actual product recited in instant claims 1-18 is identical to the battery pack disclosed by Ovshinsky et al. Applicants' claims are interpreted to recite a battery pack system which has a limited range of temperature variation between battery modules, and which remains under a specified temperature when operated. The Ovshinsky et al. invention maintains the temperatures of batteries below 45 °C (claim 21) and maintains a temperature variation between modules of less than 8 °C (claim 22), and thus meet these limitations. The specifics of how manufacturing design tolerances are determined do not distinguish the batteries per se. The Court of Customs and Patent Appeals has long recognized that an invention may be described in different ways and still be the

same invention. See Kennecott Corp. v. Kyocera International, Inc. 5 USPQ2d 1194 (CFAC 12-22-87) and In re Kirscher, 134 USPQ 324 (CCPA 1962). As discussed above, the actual battery disclosed by the applicants is not distinguished from the batteries disclosed by Ovshinsky et al.

With regards to applicants' claims 7-9, applicants assert Ovshinsky does not teach an arrangement where the battery modules in the battery pack case have a plurality of concave and convex portions on the sides opposed to other battery modules, and when the battery modules are connected by bringing the opposite convex portions into contact with each other, gaps between the battery modules formed by the concave portions act as the coolant flow paths. In response, please note Figures 11, 12 and 15 and page 26, lines 22-32 of the Ovshinsky et al. patent. Module spacers (37) with tabs (38) are placed between battery modules, and form flow channels.





Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Carol Chaney whose telephone number is (571) 272-1284. The examiner can normally be reached on Mon - Fri 8:30am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Ryan can be reached on 571-272-1292. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Carol Chaney
Primary Examiner
Art Unit 1745

31 August 2004